Long-term woodland dynamics in Central Europe: from estimations to a realistic model
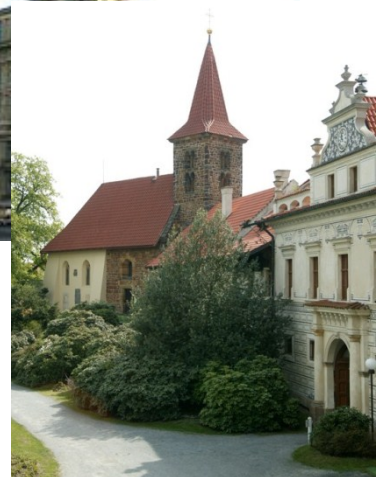
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About myself

- Studied linguistics and history in Budapest

- Specialization in the Middle Ages, PhD in interdisciplinary medieval studies

- Research interest (woodland historical ecology) lies between *history, archaeology* and *ecology*

  - Department of Medieval Archaeology at ELTE, Budapest, Hungary

  - Institute of Botany of the Czech Academy of Sciences, Brno, Czech Republic

Disappearance and transformation of woodland since the Neolithic

Several neglected aspects:

- Woodland cover until ca. AD 1800 is inferred from population density

- Effects of traditional management on tree composition

- Focus on trees, although herbaceous vegetation is key to biodiversity
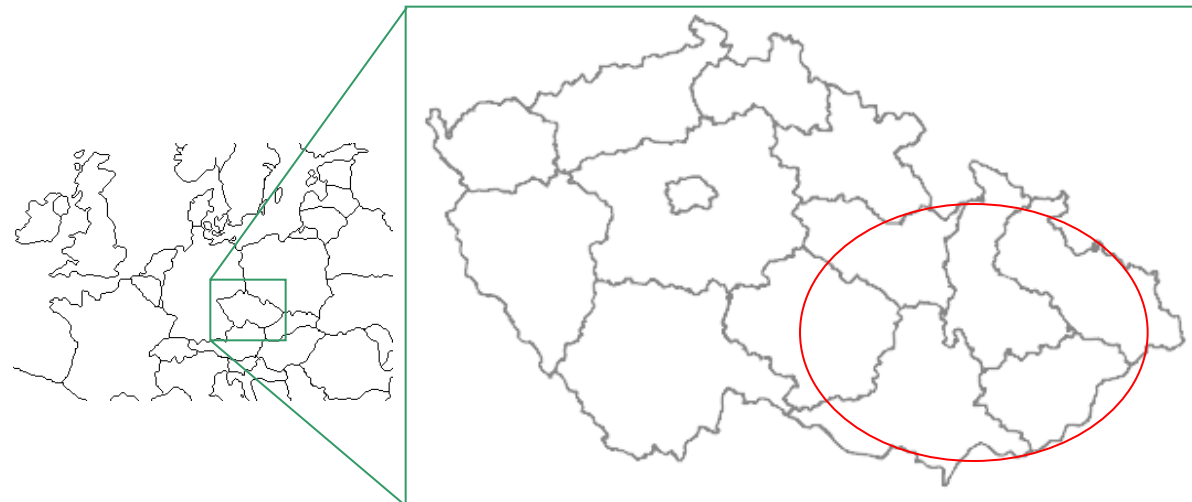
Two interconnected reasons:

- Lack of interdisciplinary cooperation

- Differences in scaling and resolution

Aims

- to combine historical, palaeoecological, vegetation ecological and archaeological data

- to build a complex model of long-term woodland dynamics in a well-defined, larger study region (Moravia) with the highest resolution possible

- to relate past patterns in the tree layer to patterns in the herb layer

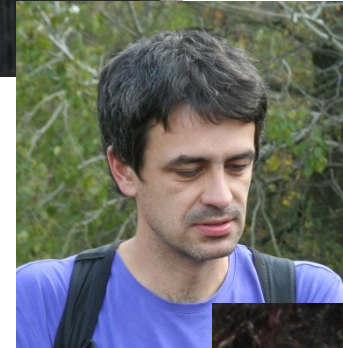- to analyze the role of humans in woodland dynamics
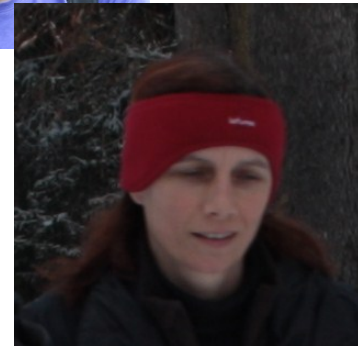
Research team

History: Péter Szabó

Palaeoecology: Petr Kuneš

Vegetation Ecology: Radim Hédl

GIS: Jana Müllerová

- young team:
  average age 33.8 yrs

- balanced gender structure:
  42% women, 58 % men

Preparation

Interdisciplinary project – fairly long preparation process

> general outline by working group leaders → individual parts → detailed research plan → feedback from all involved → updating → final version
>
> Simultaneously: technical details, consultations, budget preparation

However: from the side of ERC straightforward and easy procedure!

Why (I think) we succeeded

Key point : *well thought out strategy* (find out what makes you special and focus on that)

- unusual and interdisciplinary

- right time: start of interdisciplinary projects

- good team (essential because of interdisciplinarity), good institutional background

- deliberate focus on novel aspects

- lot of effort put into presentation (interview crucial)

Good project and good CV are a must

(first round evaluation)

Novelty and potential

- Local studies – high resolution
Large-scale models – coarse resolution

- Interdisciplinarity

  - high quality in all disciplines

  - synergetic results

- Paradigm shift in ecology

- Practical application: nature conservation and forestry

- Larger region - unprecedented amount of sources - highest resolution possible

What helped me personally

- postgraduate education in international environment and in English

- good overview of general issues of interdisciplinarity

- historical ecology is very much an upcoming discipline